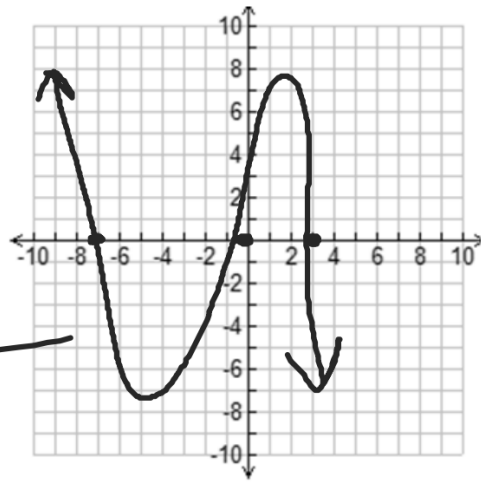
4) $y = -x(x-3)(x+7)$

Find roots:

$-x=0 \Rightarrow x=0$

$x-3=0 \Rightarrow x=3$

$x+7=0 \Rightarrow x=-7$

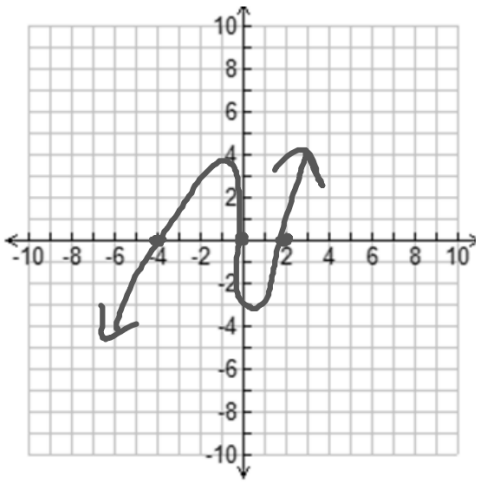


y intercept: (0,0)

E.B. $-x^3 \Rightarrow$ odd ⊖ ↑↓

Bellwork 2/8/13

$y = x(x-2)(x+4)$



Step 1: Find the roots

$x = 0$

$x - 2 = 0 \Rightarrow x = 2$

$x + 4 = 0 \Rightarrow x = -4$

Step 2: Find y-intercept (x=0)

$(0, 0)$

$0(0-2)(0+4)$

Step 3: Determine end behavior

$x^3 \Rightarrow$ odd (+) ↓↑

Graph!

5) $y = -x(x-1)(x+1)(x-5)$

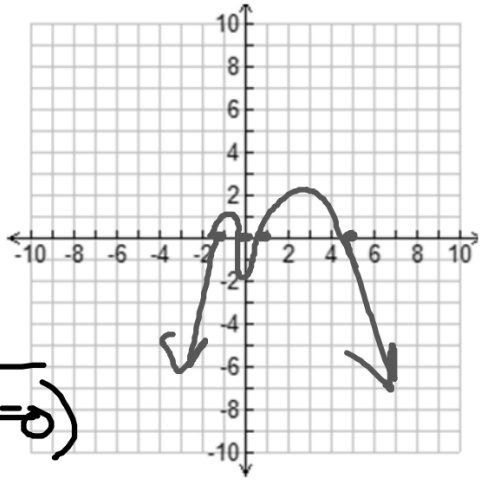
Find roots:

$-x=0 \Rightarrow x=0$

$x-1=0 \Rightarrow x=1$

$x+1=0 \Rightarrow x=-1$

$x-5=0 \Rightarrow x=5$



y intercept: $(x=0)$

$(0,0)$

End Beh. $-x^4 \Rightarrow \downarrow\downarrow$

6) $y = (x+1)(x-2)(x-3)(x+3)(x-1)$

Find roots:

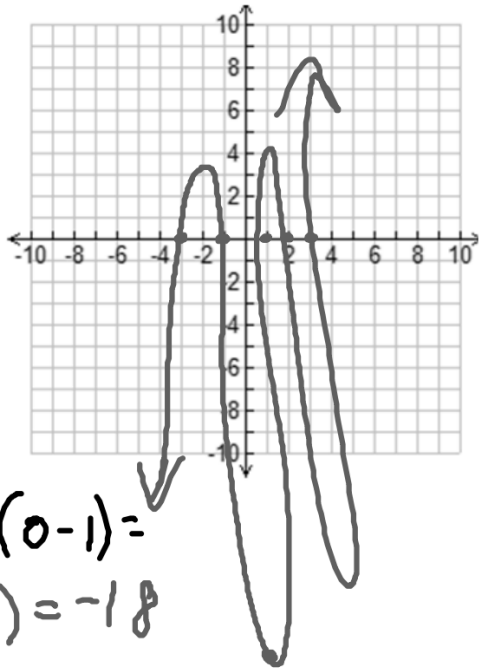
$x+1=0 \Rightarrow x=-1$

$x-2=0 \Rightarrow x=2$

$x-3=0 \Rightarrow x=3$

$x+3=0 \Rightarrow x=-3$

$x-1=0 \Rightarrow x=1$



y intercept: ($x=0$)

$(0+1)(0-2)(0-3)(0+3)(0-1) =$

$(1)(-2)(-3)(3)(-1) = -18$

$(0, -18)$

End Beh.: ↓↑ ts

odd (+)

Homework: pg 293 #13-18